

We claim:

1. A method for producing a protein comprising the steps of:
introducing into a host cell a recombinant vector in which a fusion gene
containing a gene encoding a protein constituting a virus particle and a gene encoding
5 a desired protein is incorporated;
expressing said fusion gene in said host cell to produce said desired protein
fused with said virus particle; and
recovering said virus particle with which said desired protein is fused.
- 10 2. The method according to claim 1, wherein said protein constituting said virus
particle is a coat protein of said virus.
3. The method according to claim 1, wherein said virus is baculovirus and said
host cell is an insect cell.
4. The method according to claim 3, wherein said protein constituting said virus
particle is coat protein gp64 of baculovirus.
- 15 5. The method according to any one of claims 1 to 4, wherein said desired
protein is fused with said virus particle such that at least an active region of said
desired protein is exposed to the outside of said virus particle.
6. The method according to claim 4, wherein said fusion gene comprises gp64
gene and said gene encoding said desired protein, which is located downstream of
20 said gp64 gene.
7. The method according to any one of claims 1 to 6, wherein said desired
protein is a glycosyltransferase.
8. The method according to any one of claims 1 to 7, further comprising the
steps of cleaving the recovered fusion protein to separate said desired protein from
25 said virus particle; and recovering the separated desired protein.
9. A method for producing a protein comprising the steps of:
introducing, into a host cell producing virus particles, a recombinant vector in

which a fusion gene containing a gene encoding a protein having a plurality of membrane-spanning segments and a gene encoding a desired protein is incorporated;

expressing said fusion gene in said host cell to produce said desired protein fused with said protein having a plurality of membrane-spanning segments, the
5 produced fusion protein being bound to said virus particle; and

recovering said virus particle to which said fusion protein comprising said desired protein is bound.

10. The method according to claim 9, wherein said fusion gene comprises, in the order mentioned from upstream end, said gene encoding said protein having a
10 plurality of membrane-spanning segments and said gene encoding said desired protein.

11. The method according to claim 10, wherein said virus is baculovirus and said host cell is an insect cell.

12. The method according to any one of claims 9 to 11, wherein said fusion
15 protein is bound to said virus particle such that at least an active region of said desired protein is exposed to the outside of said virus particle.

13. The method according to any one of claims 9 to 12, wherein said protein having a plurality of membrane-spanning segments is a protein having an odd number of membrane-spanning segments, and said desired protein does not have a
20 membrane-spanning segment.

14. The method according to claim 13, wherein said protein having a plurality of membrane-spanning segments is a chemokine receptor CCR3.

15. The method according to any one of claims 9 to 14, further comprising the steps of cleaving the recovered fusion protein to separate said desired protein from said protein having a plurality of membrane-spanning segments, thereby detaching
25 said desired protein from said virus particle; and recovering the separated desired protein.

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